Figure 1

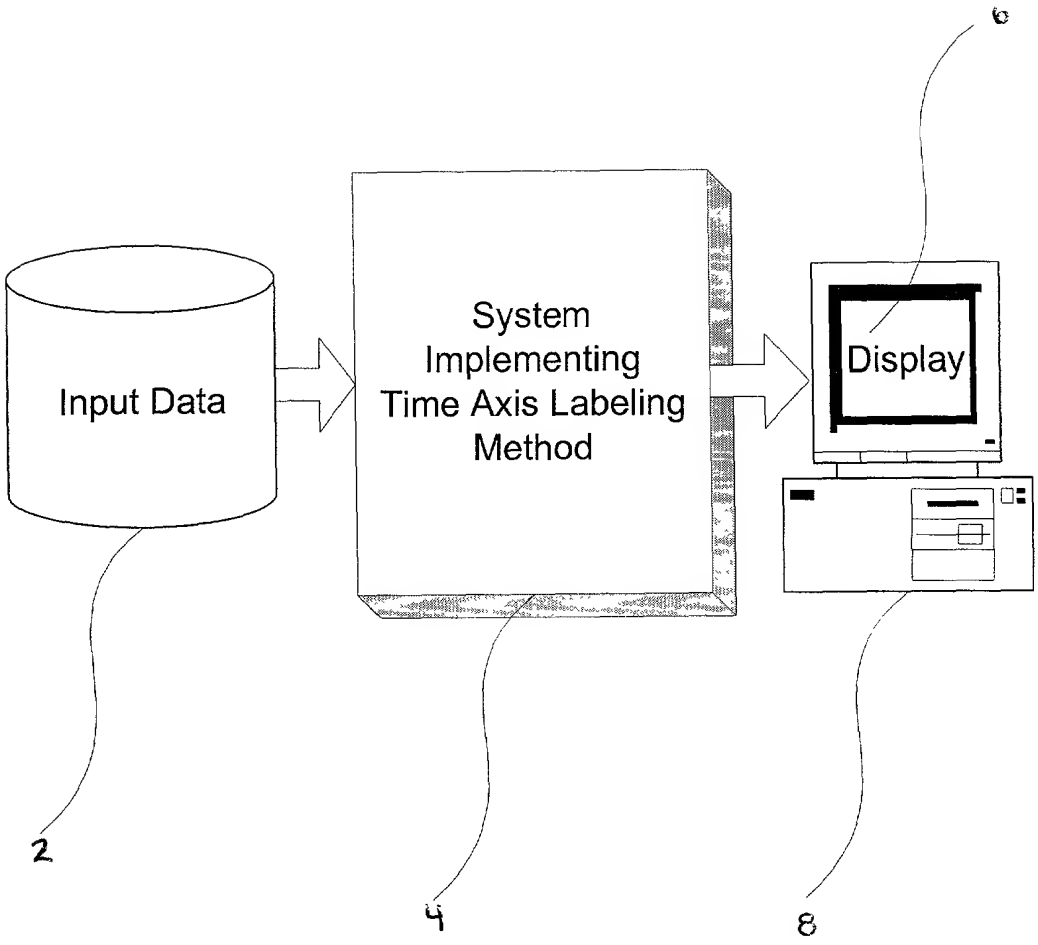

6
Input Data
System
Implementing
Time Axis Labeling
Method
Display
2
4
8

Figure 2

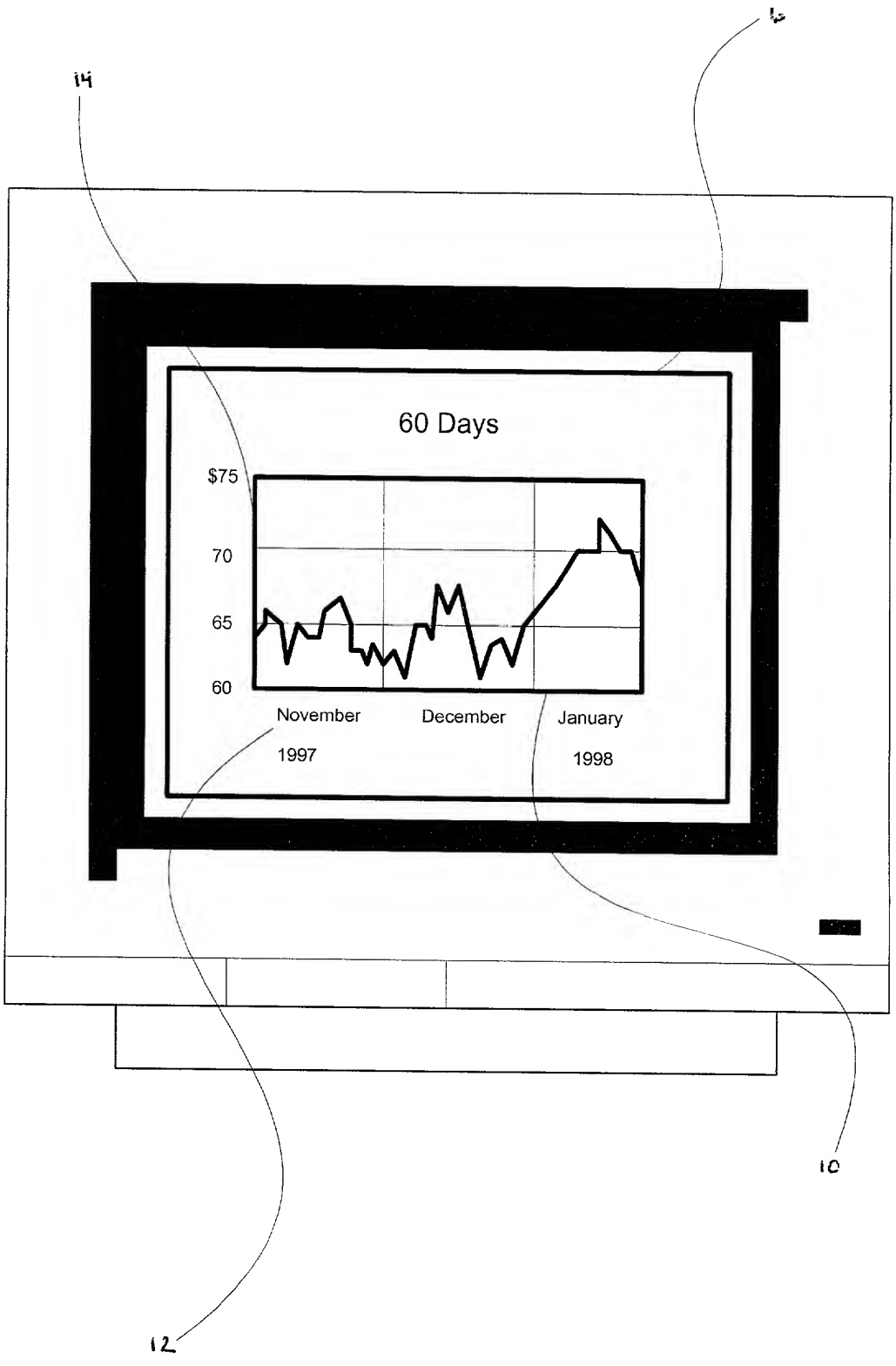

14
16
60 Days
$75
70
65
60
November
1997
December
January
1998
12
10

Figure 3

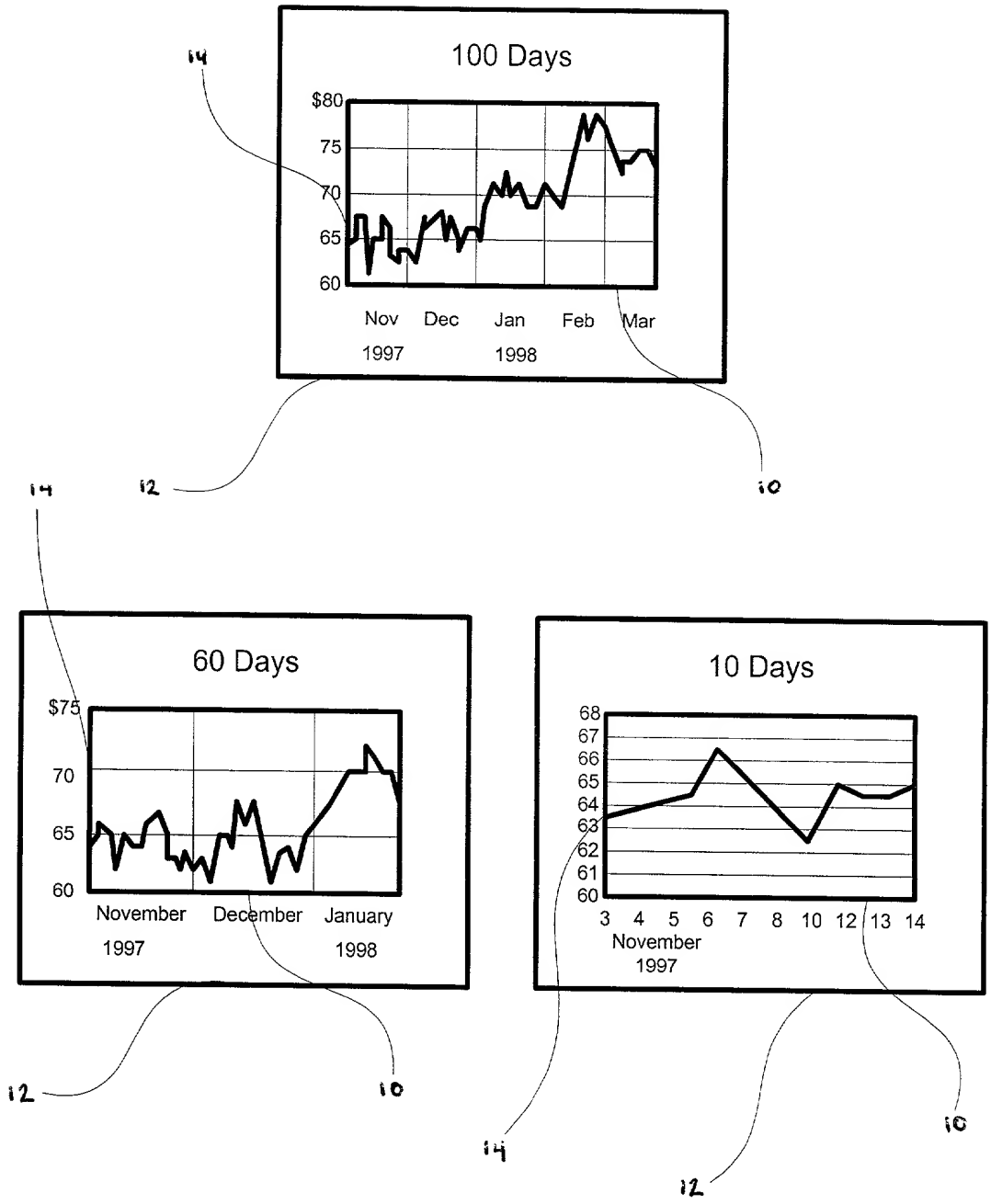
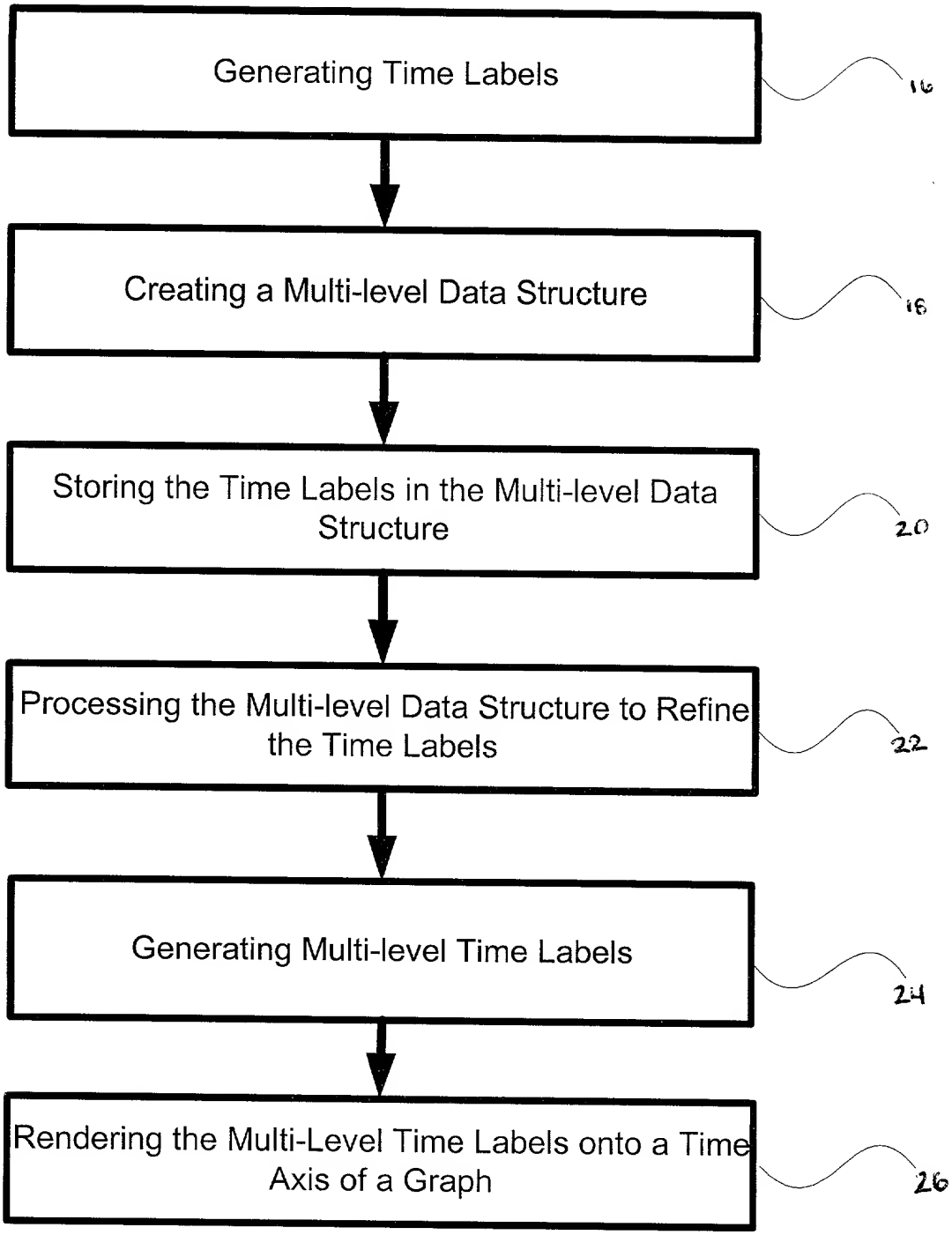

100 Days
$80
75
70
65
60
Nov
Dec
Jan
Feb
Mar
1997
1998
14
12
10
60 Days
$75
70
65
60
November
December
January
1997
1998
14
12
10
10 Days
68
67
66
65
64
63
62
61
60
3 4 5 6 7 8 10 12 13 14
November
1997
14
12
10

Figure 4


Generating Time Labels
16
Creating a Multi-level Data Structure
18
Storing the Time Labels in the Multi-level Data Structure
20
Processing the Multi-level Data Structure to Refine the Time Labels
22
Generating Multi-level Time Labels
24
Rendering the Multi-Level Time Labels onto a Time Axis of a Graph
26

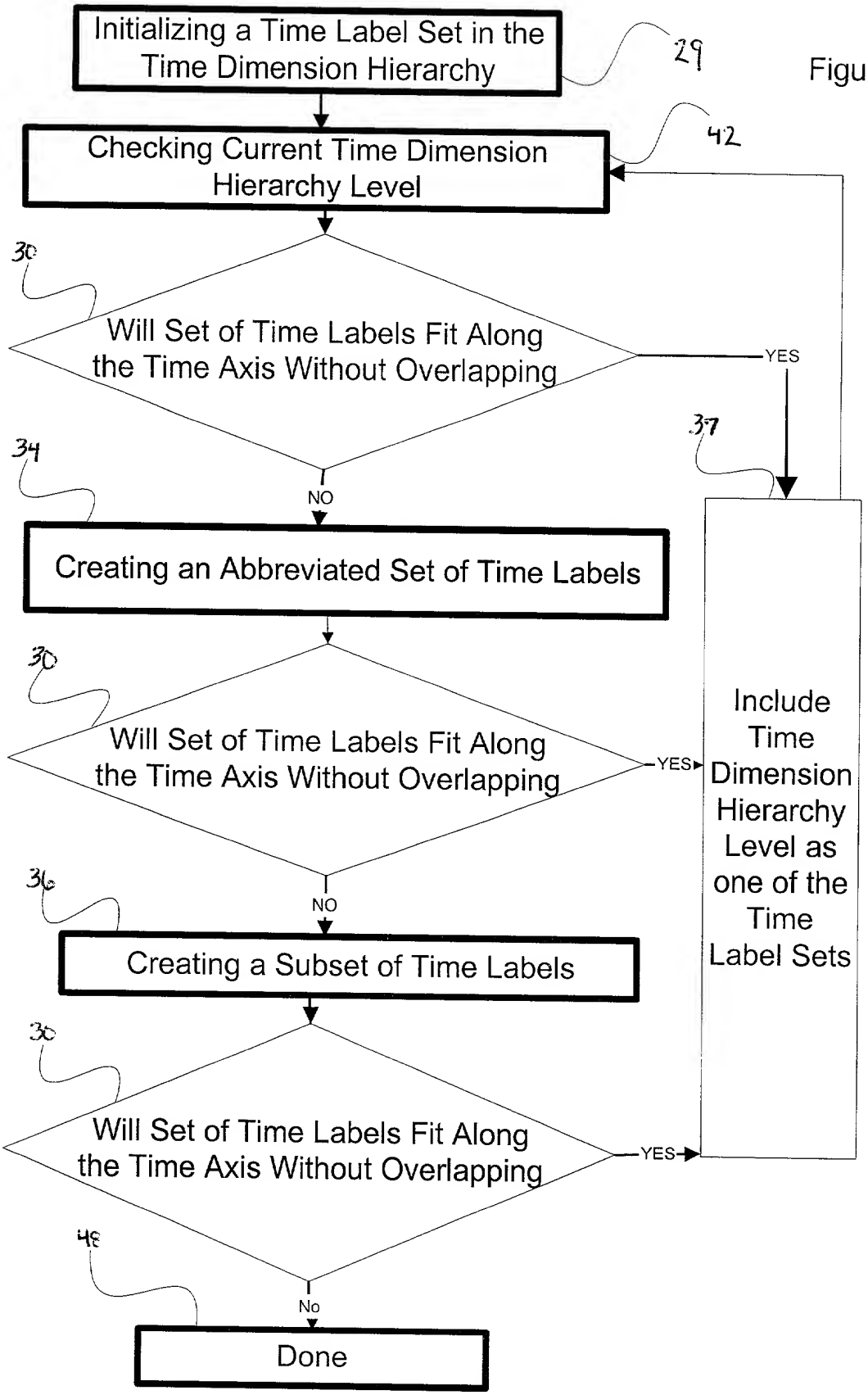

Initializing a Time Label Set in the Time Dimension Hierarchy
29
Checking Current Time Dimension Hierarchy Level
42
30
Will Set of Time Labels Fit Along the Time Axis Without Overlapping
YES
NO
34
Creating an Abbreviated Set of Time Labels
30
Will Set of Time Labels Fit Along the Time Axis Without Overlapping
YES
NO
36
Creating a Subset of Time Labels
30
Will Set of Time Labels Fit Along the Time Axis Without Overlapping
YES
No
48
Done
37
Include Time Dimension Hierarchy Level as one of the Time Label Sets

Figure 5

Figure 6a

L0:	5pm [0,1]	6pm [1,2]	7pm [2,3]	8pm [3,4]	9pm [4,5]	10pm [5,6]	11pm [6,7]	12am [7,8]
L1:	Mon [0,7]							Tue [7,8]
L2:	15 [0,1]	16 [1,2]	17 [2,3]	18 [3,4]	19 [4,5]	20 [5,6]	21 [6,7]	22 [7,8]
L3:	Nov. [0,8]							
L4:	2000 [0,8]							

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Figure 6b

L0:	5:30pm [0,1]	6pm [1,2]	7pm [2,3]	8pm [3,4]	9pm [4,5]	10pm [5,6]	11pm [6,7]	12am [7,8]
L1:	Mon [0,7]							Tue [7,8]
L2:	15 [0,1]	16 [1,2]	17 [2,3]	18 [3,4]	19 [4,5]	20 [5,6]	21 [6,7]	22 [7,8]
L3:	Nov. 2000 [0,8]							
L4:								

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